

Local Hazard Mitigation Plan ANNEX

City of Rio Vista

Introduction

The City of Rio Vista is a small city in eastern Solano County, California located on the Sacramento River. The City had a population of 4,571 people, based on the 2000 census, with an increase to 7,376 reported in the 47th California Statistical Abstract (CA Department of Finance, Economic Research Unit) by 2006¹. The City's 2006-07 General Fund budget is a little over \$20 million. The City currently employs approximately fifty-one (51) full-time and twenty-two (22) part-time or seasonal people. The City provides full local police and fire services.

The Planning Process

The City of Rio Vista is familiar with the process of preparing this kind of plan. The City's General Plan Safety Element, last updated in 2002, includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) (which, since 1988, have required mitigation for identified natural hazards). The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided oral comments on the multi-jurisdictional plan, particularly related to flooding issues. Finally, the City provided ABAG information on facilities that are viewed as "critical."

Key City staff met on two occasions to identify and prioritize mitigation strategies appropriate for the City. Departments or Divisions involved in these meetings included Planning, Community Development, Building & Safety, City Manager, City Engineer, Public Works, Fire, Finance, and Police. At the first meeting, the general priorities and appropriate City departments were identified. The second meeting identified preliminary budgets and potential funding sources for strategies designed as "High" priority. The City provided an opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff at the City Council meeting of February 15, 2007. The resolution adopting the plan and strategies was on the City Council agenda on April 5, 2007, the first available meeting following FEMA review for approval of the Annex and Mitigation Strategies. At this meeting the City provided an opportunity for additional public comment.

¹ For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

In addition to public and staff participation recounted above, the City of Rio Vista has had substantial involvement in emergency management, preparedness and mitigation activities for more than a decade. This involvement is highlighted and described as follows:

- **Marci Coglianese, past Mayor and Councilperson for the City** (1997-2004); has practiced municipal and environmental law for more than 20 years. Her accomplishments in furthering the interests of sound planning, environmental and risk management practices for the Delta are only touched upon in this text. Ms. Coglianese represented the League of California Cities on the state Floodplain Management Task Force and on the public advisory committee to update the California Water Plan. She is currently co-chair of the Delta Levees and Habitat Subcommittee of the Bay Delta Public Advisory Committee; is helping develop the state mandated Delta Risk Management Strategy (DRMS); and, participated as a speaker for: “ReEnvisioning the Delta Symposium” (March 2006) and the “Great Delta Charrette”(Oct 2006) – in support of “The Delta Initiative” – a multi-year research and planning project focused on the California Delta. Ms. Coglianese, as an elected local official and neighbor-resident, has also served as a tireless and invaluable educational resource for the public and City Staff.
- **Jan and Rich Rogala, Dimensions Unlimited, Inc.**, Emergency Management Consulting Firm, - are also residents of Rio Vista. Dimensions Unlimited prepared the City’s current Emergency Operations Plan. Many excellent opportunities for public participation, education and training in emergency management were offered during the process of preparing the Operations Plan. It is very unusual for a city the size of Rio Vista to have this level of expertise available to its citizens, staff and elected officials.
- **Sheri Lasick, Sylvir Consulting, Inc.** – Ms. Lasick met with department heads during 2006 as part of the City Manager’s commitment to maintain and expand the city’s emergency management plans, resources and strategies.
- **Congressman Dan Lungren, Solano County Supervisor Mike Reagan and the Rio Vista City Council** - coordinated two (2) Saturday morning public meetings in 2006 (at Rio Vista City Hall) to provide information and encourage input regarding all-hazards management. Both meetings were well attended by citizens and members of the business community, as well as the Mayor, City Council, Planning Commissioners and City staff.
- **Community Emergency Response Teams (CERTs)** – The City’s first 30-member CERT was established in 2006. A second 30-member CERT is anticipated to complete training in April 2007.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine (9) hazards that impact the Bay Area:

- ❖ Five related to earthquakes:
 - faulting
 - shaking
 - earthquake-induced landslides
 - liquefaction
 - tsunamis
- ❖ Four related to weather:
 - flooding
 - landslides
 - wildfires
 - drought

All except two (2) of these hazards (surface faulting and tsunamis) impact the City of Rio Vista. The Rio Vista fault has displayed no movement over the last 200 years, nor has there been any recent evidence of surface faulting or tectonic creep. (Gilbert and Associates, 1975 – and - Jones and Stokes Associates, 1974 – Rio Vista General Plan, Pg.11-7, 2002.)

While the City has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

Information on disasters declared in Solano County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of City urban land based on the information on ABAG's website at: <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 3,465 urban acres (Total City acreage is 4,103.) in the City:

- **Earthquake Faulting** – No active faults run within the city so rupture of a fault is not a direct concern. The Rio Vista Fault has shown no movement in the last 200 years, nor has it exhibited earthquake faulting or tectonic creep.
- **Earthquake Shaking** – No acres are in the highest two categories of shaking potential. Faults closest to the City and Montezuma Hills area are the Rio Vista Fault and the Midland Fault, both of which have been historically inactive (no movement over the last 200 years) and are poorly understood.
- **Earthquake-induced Landslides** – the California Geological Survey has not completed mapping of this hazard in the City of Rio Vista. However, because few areas have been mapped as landslides, this hazard is viewed as similar to that posed by weather-related hazards.

- **Earthquake liquefaction** – 600 acres are in areas of moderate, high, or very high liquefaction susceptibility.
- **Tsunamis** – Tsunamis have been determined to present a minimal hazard for the City of Rio Vista.
- **Flooding** – 281 urban acres (8%) are in the 100-year flood plain, while an additional 15 urban acres are in 500-year flood-prone areas. The adjacency of the entire eastern edge of the City to the Sacramento River, however, poses a unique risk from the combination of stormwater runoff and tidal action.
- **Landslides** – 2,062 urban acres (59.5%) are recorded as susceptible to “Few Landslides.” No urban acres are in areas of “Mostly Landslides” or “Many Landslides.”
- **Wildfires** – No acres are subject to High, Very High, or Extreme wildfire threat, nor are there any urban acres located in wildland-urban interface threat areas.
- **Dam Inundation** – 425 (12%) urban acres are subject to dam inundation in the event that Monticello Dam failed. Monticello is located in Napa and Solano Counties, 30 miles west of Sacramento. The Dam was built between 1953 and 1957, and flows into Putah Creek as its direct, primary spillway.
- **Drought** – all 4,103 acres are subject to drought in Rio Vista, just as all of California is at risk for long-term impacts from drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG’s website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 40 miles of roadway in the City,

- ◆ **Earthquake Faulting** – No active faults run within the city so rupture of a fault is not a direct concern.
- ◆ **Earthquake Shaking** – Three (3) miles of Pipeline Under Roads; one (1) mile of Highway grade roadway; and, two (2) miles of Minor Street grade roadway are in the modest/median category of shaking potential.
- ◆ **Earthquake-induced Landslides** – the California Geological Survey has not completed mapping of this hazard in the City of Rio Vista. However, this is unlikely to be an issue because no roads are in existing landslide areas.
- ◆ **Earthquake Liquefaction** – Six (6) miles of roadway (One (1) mile of Highway grade, plus five (5) miles categorized as Minor Street grade) are in areas of Very High liquefaction susceptibility. This assessment is matched by a total of six (6) miles of Pipeline Under Roads listed as having Very High liquefaction susceptibility.
- ◆ **Tsunamis** – Tsunamis have been determined to present a minimal hazard for the City of Rio Vista.
- ◆ **Flooding** – Two (2) miles of roadway and two (2) miles of pipeline are in the 100-year flood plain. No other infrastructure is listed as vulnerable to either 500-yr flood, or ‘other’ forms of flood impact.
- ◆ **Landslides** – No roads are in areas of existing landslides.
- ◆ **Wildfires** – No (0) miles of City infrastructure are listed as subject to High, Very High, or Extreme wildfire threat, nor is any City infrastructure included in wildland-urban interface threat areas.

- ◆ **Dam Inundation** – Eight (8) miles of roadway and under road pipeline are considered to be in an area subject to dam inundation.
- ◆ **Drought** – is not assessed as a hazard for roadways and infrastructure.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at

<http://quake.abag.ca.gov/mitigation/pickcrit.html>.

- ◆ **Earthquake Faulting** – No active faults run within the city so rupture of a fault is not a direct concern. The Rio Vista Fault has shown no movement in the last 200 years, nor has it exhibited earthquake faulting or tectonic creep. ABAG research identifies the following facilities as having some degree of risk exposure: No health services facilities; 3 schools; 3 City facilities; 1 County facility; and, 2 bridges.
- ◆ **Earthquake Shaking** – All 3 schools; 3 City facilities; 1 County facility and 2 bridges are listed in the moderate/middle categories of shaking potential.
- ◆ **Earthquake-induced Landslides** – The California Geological Survey has not completed mapping of this hazard for the City of Rio Vista.
- ◆ **Earthquake Liquefaction** – The three City-owned facilities are recorded as Very High susceptibility for post-earthquake liquefaction. All other facilities regarded as having hazard exposure (3 schools, 1 County building site and 2 bridges) are determined to be Low/Very Low susceptibility.
- ◆ **Tsunamis** – Tsunamis have been determined to present a minimal hazard for the City of Rio Vista.
- ◆ **Flooding** – No critical health care facilities, schools, or government-owned facilities are in either the 100-year flood plain or in other flood-prone areas. All Rio Vista identified facilities (3 schools; 3 City facilities; 1 County facility and 2 bridges) are listed as "Minimal or Undetermined Flood Hazard." The City plans to work with ABAG during 2007 to review and expand assessment information and historical data regarding flooding and critical facilities.
- ◆ **Landslides** – no critical health care facilities, schools, or government-owned facilities are in areas, which have a history of landslides.
- ◆ **Wildfires** – Identified facilities (3 schools; 3 City facilities; 1 County facility and 2 bridges) are determined to be subject to Moderate to Low threat of wildfire.
- ◆ **Dam Inundation** – No critical health care facilities; 2 schools; 1 city-owned facility; 1 County owned facility; and 1 bridge are in locations considered to be subject to dam failure inundation.
- ◆ **Drought** – Drought will not affect city buildings directly. However, the City does operate and manage its own water-supply distribution system.

There are **three (3)** repetitive loss properties with a total of **eight claims** reported in the City, per information recorded at: <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The City plans to work with ABAG during 2007 to improve the risk assessment information being compiled by ABAG, as well as to review and expand assessment information and historical data regarding flooding and critical facilities. As of the end of 2006, the City had provided ABAG with information on unreinforced masonry buildings. There currently are no soft-story apartments located in the City.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and various water supply and resource agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted.

As these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The City has concluded that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, City of Rio Vista staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at two staff meetings attended by the Police Chief, Building Official, Fire Chief, Finance Officer, Recreation Director, City Clerk, City Engineer, Public Works Director, Community Development Director, and City Manager in February 2007. At the second meeting on February 15th, 2007, all of the mitigation strategies were reviewed in terms of priority. Priorities were assigned based on a number of criteria, including: cost-benefit analysis; technical and administrative feasibility; political acceptability; social appropriateness; legality; and, environmental/cultural impacts.

Over time, the City is committed to developing better hazard and risk information to apply in evaluating mitigation strategies. The City's hazard mitigation planning process does not look to 'disaster-proof' the region, but to maximize 'disaster *resistance*' in every way possible.

These draft priorities were submitted to the City Manager for review. The draft priorities were then provided to the City Council on April 5, 2007. The public was provided with an opportunity to comment on the DRAFT priorities. The strategies (as shown in the attached Table), once adopted, will be incorporated as an *Implementation Appendix* to the City's *Safety Element* of its General Plan as part of a future amendment to that document..

In addition, the City examined the hazard exposure information, relative to City-owned critical facilities, as supplied by ABAG. The City has determined that characteristics such as: facility construction type and condition; age of building(s); functional and economic obsolescence; general vulnerability to local hazards; etc., combine to a degree that recommends replacement or substantial rehab for Police and Fire Facilities. Therefore, the City plans to apply for a Pre-

Disaster Mitigation grant to resolve this serious problem in providing adequate emergency services facilities for the City.

The Plan Maintenance and Update Process

The City Manager and Community Development Director are tasked with the responsibility of ensuring that **monitoring** of this Annex will be carried out on an ongoing basis. However, the major disasters affecting the City, legal changes, notices from ABAG as the Lead Agency in this process, and other variables will also trigger monitoring and possibly revision to the Annex. Finally, the Annex will be a discussion item on the agenda of the regular meeting of City executive staff at least once a year in January-February. At that meeting, the executive staff will focus on **evaluating** the Annex in light of technological and political changes during the past year or other significant events. This group will be responsible for determining if the (HMP) plan should be updated.

The City of Rio Vista is committed to reviewing and **updating** this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City Planning Director will contact ABAG, four years after this plan is approved, to ensure that ABAG plans to undertake the plan update process. If so, the City agrees to participate, again, in the multi-jurisdictional plan process. If ABAG is unwilling or unable to act as the Lead Agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The **public** will continue to be involved whenever the plan is updated, and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide an opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.